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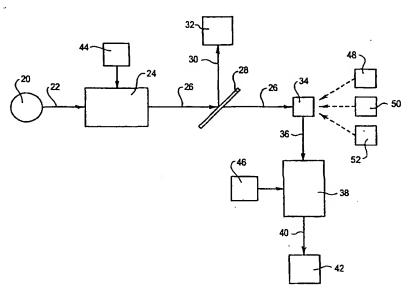
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(57) Abstract: A spectrometry instrument, e.g., for time-resolved spectroscopy, has quick-change exchangeable accessories (48, 50, 52) which are manually attached via rotation of a camming means to engage and lock a stud member. A circuit element in each accessory (48, 50, 52), such as a resistor or a configured pin connection, acts to generate a voltage in the instrument that uniquely identifies which accessory is attached. A method for measuring a phosphorescence decay characteristic includes applying an excitation pulse to a sample (34); obtaining emission intensity data for a sequence of time delays following the excitation pulse; repeating for at least one further excitation pulse using a different sequence of time delays; and interleaving the data from different excitation pulses to construct a decay characteristic.